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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,695	01/18/2002	Bernard O. Geaghan	56899US003	3808

32692 7590 01/02/2004

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EXAMINER

LEFLORE, LAUREL E

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,695

Applicant(s)

GEAGHAN ET AL.

Examiner

Laurel E LeFlore

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 19-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "464" in figure 7 has been used to designate both a voltage and a capacitance. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 500, 514 and 515 on page 20. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 574 and 575 in figure 9. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to because in figure 8, element 468 should be 472. Also, in figure 9, elements 574 and 575 should be 514 and 515. A proposed drawing correction or corrected drawings are required in reply to the Office action

to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

In table 1, which appears on page 10 of the specification or page 6 of the amended specification, in row 1, column "Contact Point 314", "Must also touch Contact Point 312" should be "Must also touch Touch Sensor 312".

In table 2, which appears on page 15 of the specification, the three divisions under "Sensor Sensitivity and Responsiveness (refer to Figure 7)" should be "Touch Sensor 412" instead of "Sensor 11a", "Contact Point 414" instead of "Pad 52" and "Contact Point 415" instead of "Pad 53".

On page 16, line 11, "464" should be "472" and on line 32, "222" should be "422".

On page 17, line 4, "464" should be "472".

On page 20, line 13, "414 and 415" are not in figure 9. "414 and 415" refer to elements "574 and 575" in the drawings, which should be "514 and 515".

On page 22, line 6, "464" should be "472".

On page 23, line 20, "464" should be "472".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 19, 20, 23-26, 28-31, 33 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Dietz et al. 6,498,590 B1.

In regard to claim 19, Dietz et al. discloses a system for determining information related to a touch on a touch sensor. The system comprises a first user contact point separate from the touch sensor. The contact point is a user's chair. See column 3, lines 10-14, disclosing that the "chairs [see figure 1] 121-122...include conductive parts...electrically connected to individual receivers."

Dietz et al. further discloses that the first user contact point is driven with a first signal. See column 2, lines 26-28, disclosing, "Receivers are capacitively coupled to different users, and configured to receive the uniquely identifiable signals. Also, the touch on the touch sensor transfers at least a portion of the first signal to the touch sensor. See column 2, lines 9-11, disclosing, "When a user touches near a particular antenna, the transmitted signal is capacitively coupled to that user. If the user is sitting...on a conducting electrode, the signal will also be capacitively coupled to that electrode." Also see column 2, lines 56-59, disclosing that "a tabletop 101...is fitted with conductive rows 102 and columns 103 of touch sensitive pads 105...[which] act as antennas." In this way, the tabletop, or plurality of antennas, is the touch sensor.

Dietz et al. further discloses that the touch sensor is configured to use the transferred first signal to determine information related to the touch on the touch sensor. See column 2, lines 46-52, disclosing that the invention of Dietz et al. "provides a touch sensitive system that enables multiple users to simultaneously touch a surface, and to associate the location of each touch or multiple simultaneous touches with a specific user. Our touch system capacitively couples a signal between locations on the touch surface and users so that unique touched locations can be identified with specific users."

Note also in column 2, lines 13-16, that "the system can also work in reverse, with the table being an array of receiving antennas and the user coupling signal from a unique transmitter in a chair". Thus, the signal can be transferred from the user contact point to the touch sensor or from the touch sensor to the user contact point.

8. In regard to claim 20, Dietz et al. discloses that a user touches both the touch sensor and the first user contact point to transfer the first signal. See rejection of claim 19. Note that a user touches the first user contact point upon sitting in the chair. The first signal is transferred when a user is touching the first user contact point and the tabletop, or touch sensor.
9. In regard to claim 23, Dietz et al. discloses that the information related to the touch includes touch position on the touch sensor. See rejection of claim 19. Note that Dietz et al. discloses that the location of each touch can be identified.

10. In regard to claim 29, Dietz et al. discloses that the first user contact point must be touched in order for the touch system to determine the position of a touch to the touch sensor. See rejection of claim 19. In order for the antennas of the touch sensor to transmit a position, the user contact point must be receiving such information. This is accomplished when the user sits in the receiver chair and touches the touch sensor tabletop. Thus, the user contact point must be touched in order for the system to determine touch position on the touch sensor.
11. In regard to claim 24, see rejection of claim 19. Dietz et al. discloses a second user contact point separate from the touch sensor. This second user contact point is a second chair. Also see figure 1, depicting chairs 121 and 122 (user contact points 1 and 2).
12. In regard to claim 25, Dietz et al. discloses that the second contact point is driven with a second signal unique from the first signal. See rejection of claim 19. In particular, see column 2, lines 26-28, disclosing, "Receivers are capacitively coupled to different users, and configured to receive the uniquely identifiable signals." The receivers correspond to different user contact points, or chairs.
13. In regard to claim 26, Dietz et al. discloses that the information related to the touch includes identifying whether the first signal or second signal is transferred to the touch sensor. See rejections of claims 19 and 24-25. Note that the first and second signals correspond to first and second users in first and second chairs. See column 2, lines 28-30, disclosing, "When multiple users simultaneously touch any of the antennas, each touched antenna is associated

with a particular user.” Thus, information related to touch is associated with a particular user, and it is thus identified whether the first or second signal has been transferred.

14. In regard to claim 28, Dietz et al. discloses that the first user contact point, or receiver, is driven with a guard signal that reduces noise in the system. See column 6, lines 49-53, disclosing that in order to maximize the signal to noise ratio at the receivers, “The frequencies of the transmitted signals are kept low, e.g., under 1 MHz.” It is understood that this constitutes a guard signal.
15. In regard to claim 30, see rejection of claim 19.
16. In regard to claim 31, see rejections of claims 24-25.
17. In regard to claim 33, see rejection of claim 26.
18. In regard to claim 34, Dietz et al. discloses that the touch sensor is a capacitive touch sensor. See figure 4, depicting the table, or touch sensor, as a capacitance. See column 5, lines 9-11, disclosing, “*C_{table}* 401 represents the capacitance between the user’s finger and a transmitting antenna of the surface. Dietz et al. further discloses that a sensitivity of the touch sensor is enhanced by completing a circuit that comprises a user, the first contact point, and the touch sensor. See figure 4, which depicts this circuit. Also see column 5, lines 9-12, disclosing that a user is a part of this circuit, as “*C_{chair}* 402 represents the capacitance between the user and a conducting chair.” Note that the circuit does not include a ground.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 21, 22, 27 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz et al. 6,498,590 B1 in view of Phares 5,815,141.

In regard to claims 21 and 22, Dietz et al. discloses an invention similar to that which is claimed in claims 21 and 22. See rejection of claim 19 for similarities. Dietz et al. does not disclose a touch sensor switch electrically connected to the touch sensor, a user contact point switch electrically connected to the first user contact point, and a power source, wherein the touch sensor switch and the user contact point switch are further electrically connected to the power source, wherein the touch sensor switch or the user contact point switch must be closed in order for the system to determine information related to the touch.

In regard to claim 21, Phares discloses a touch system with multiple selectable touch regions. Each of the touch regions is connected to a switch. See figure 2, depicting an embodiment with 2 such regions. Thus, Phares discloses two separate touch regions that are understood to constitute a touch sensor and a user contact point. Each of these regions is electrically connected to a switch. Also see column 3, lines 14-19, disclosing, "at least one of the separate regions can be made sensitive and other regions made insensitive

through the utilization of switching means. Thus, one or more regions can be made insensitive...when activation is desired only in the selected region of the touchscreen."

In regard to claim 22, see column 4, line 65 to column 5, line 2, in which Phares discloses that a closed switch causes an activation of a touch area, while an open switch makes the touch area inactive.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Dietz et al. by electrically connecting each of the first user contact point and the touch sensor to a switch and making such regions active with the close of respective switches as taught by Phares. One would have been motivated to make such a change based on the teaching of Phares that such utilization of switching means is beneficial "when activation is desired only in the selected region of the touchscreen." Also, the closing of a switch to cause some activation is common and consistent with conventional use of switches. In regard to the power source connected to the switches, it is inherent that any type of electrical switch requires a power source to be operable.

21. In regard to claim 27, Dietz et al. discloses an invention similar to that which is disclosed in claim 27. See rejection of claim 19 for similarities. Also see column 3, lines 14-16, disclosing, "It should be understood that other conductive items can also be used to identify users, e.g. conductive floor mats, wristbands, belts, etc." Thus, Dietz discloses that the user contact point can be placed in varying

locations. Dietz et al. does not disclose that the first user contact point and the touch sensor are mounted in a single touch system housing.

Phares discloses a system of multiple touch inputs, each mounted in a single touch system housing. See figures 1-3. Also see column 3, lines 8-11, disclosing, "This is achieved...by dividing a conductive cover sheet of a resistive touchscreen into electrically-isolated regions."

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Dietz et al. by mounting the user contact point and touch sensor in a single touch system housing. One would have been motivated to make such a change based on the teaching of Phares that such a placement of touch portions maintains electrically-isolated regions. Also, such a modification would making the contact point integral with the touch sensor is obvious (In re Larson, 144 USPQ 347 (CCPA 1965)).

22. In regard to claim 32, Dietz et al. discloses an invention similar to that which is disclosed in claim 32. See rejection of claim 19 for similarities. Dietz et al. Does not disclose switches associated with the touch sensor and contact points, and thus does not disclose modes for those switches.

Phares discloses a touch system of three regions (see figure 3), each of the regions being associated with a switch. Also see column 5, lines 14-19, referring to the three conductive portions 20, 20A, and 20B of figure 3, disclosing, "Each would be connected (or disconnected) by an appropriate switch means 26 to the circuitry 14 so as to select any one, any combination, or all of the portions

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of the touchscreen covered by the conductive portions to be made sensitive ("active") to a touch." Thus, Phares discloses all modes created by combinations of the three switches being on or off.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Dietz et al. by associating the touch sensor and contact points with switches and to have various modes associated with the different combinations of opening and closing the switches. One would have been motivated to make such a change based on the teaching of Phares to use "appropriate switch means...so as to select any one, any combination, or all of the portions of the touchscreen".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laurel E LeFlore whose telephone number is (703) 305-8627. The examiner can normally be reached on Monday-Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (703) 305-3885. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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LEL


Amare Mengistu
Primary Examiner